23PMB11 — GENERAL MICROBIOLOGY AND MICROBIAL DIVERSITY

Time : Three hours   Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is atomic force?

2. Define micrometry.

3. What is growth curve?

4. Define nutrition.

5. State any four types of green algae.

6. List out the economic importance of algae.

7. Define disinfection.

8. What is sterilization?

9. Name any four methanogenic organisms.

10. Define the term Biodiversity.

Answer ALL questions.

11. (a) Differentiate between bright and darkfield microscopy.

Or

(b) Inspect the applications of micrometry.

12. (a) State the general characteristics of Actinomycetes.

Or

(b) Define the terms:

(i) Batch culture

(ii) Synchronous culture

13. (a) State the environmental significance of blue green algae.

Or

(b) Assess the economic importance of Polysiphonia.

14. (a) How to preserve the pure culture?

Or

(b) Examine the various methods of sterilization with suitable example.

15. (a) Interpret the general characteristics of thermophiles.

Or

(b) Explain briefly about acidophiles.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Illustrate the working principles of Transmission Electron Microscope and its importance.

17. Assess the various phases of growth curve and its measurement.

18. Illustrate the types of reproduction in algae.

19. Classify different types of staining methods.

20. Predict the morphological characteristics of methanogenic bacteria and its importance.